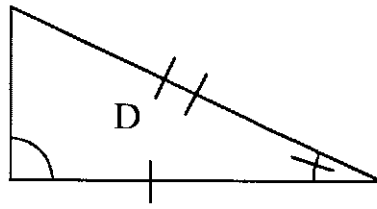
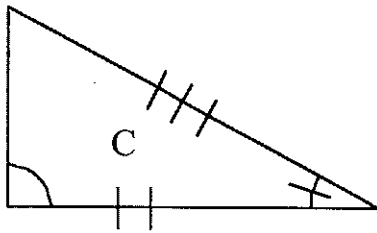
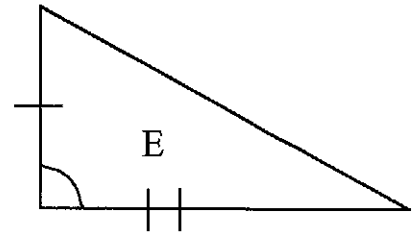
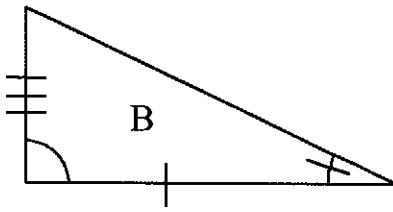
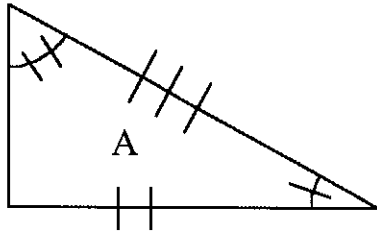


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For following 2 problems determine which triangles are congruent by the given reason:

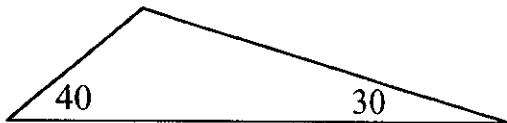
18. Which two triangles are congruent by ASA? _____ and _____

19. Which two triangles are congruent by SAS? _____ and _____



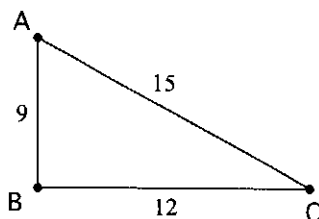
20. Determine the type of triangle.

a) acute b) right c) obtuse _____



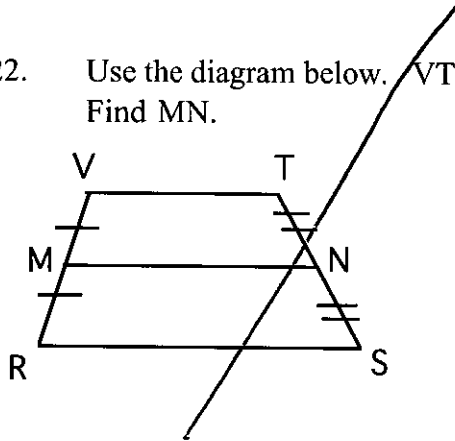
21. Determine the smallest angle.

a) $\angle A$ b) $\angle B$ c) $\angle C$ _____

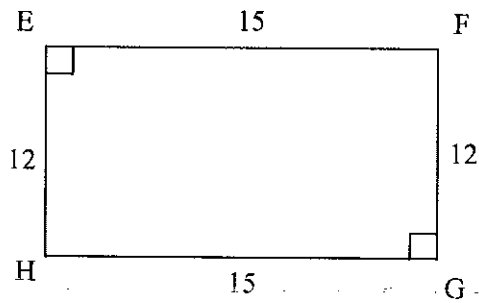
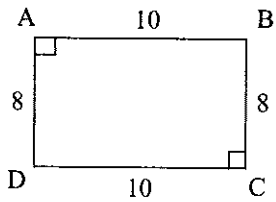


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22. Use the diagram below. $VT = 9$ and $RS = 13$
Find MN .



Use the diagram below for problems #23 - #24.
Find each ratio in simplest form.

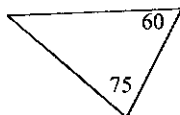
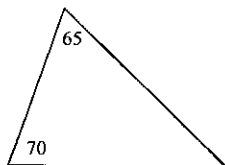


23. $\frac{AB}{EF}$

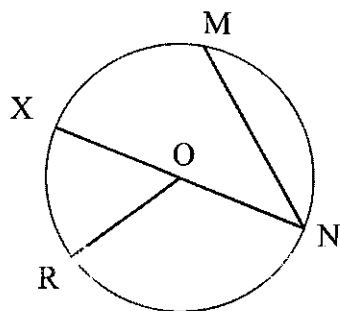
24. $\frac{\text{perimeter of } ABCD}{\text{perimeter of } EFGH}$

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25. Tell whether or not the polygons are similar. Write 'yes' or 'no'.



For problems #26- #28 use the diagram below. O is the center of the circle.



26. Name a diameter and find its length if $OR = 5$.

Diameter: _____

length: _____

27. Name a radius.

28. Find the circumference of the circle if $OR = 5$.

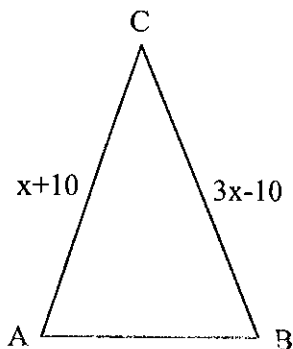
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PART TWO (2 POINTS EACH)

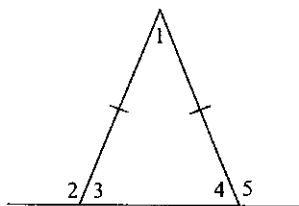
Partial credit WILL be given for work shown. NO CREDIT will be given for answers that cannot be read.

29. If the measures of the angles of a triangle are represented by x , $2x$, and $2x + 20$, what is the value of x ? _____

30. Use the following diagram. If $\angle A \cong \angle B$, find x . _____

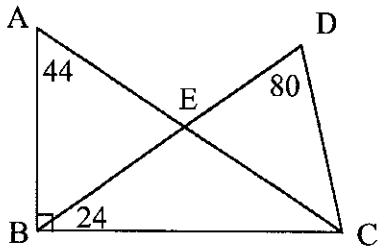


31. If $m\angle 2 = 125^\circ$, then what is the $m\angle 1$? _____

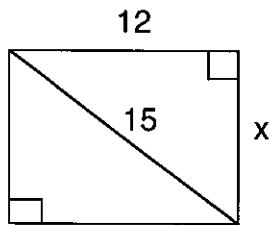


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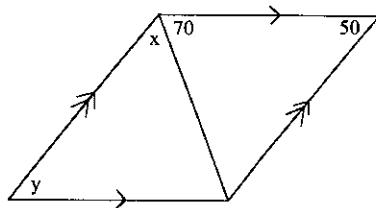
32. In the diagram below, find the measure of $\angle DCA$.



33. Solve for x :



For problems 34 and 35, use the diagram below.

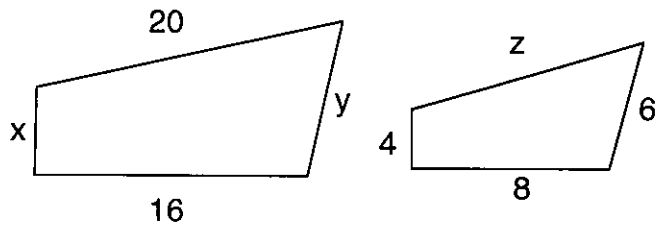


34. Find x .

35. Find y .

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Use the diagram below for problems 36 - 38. The two polygons are similar.

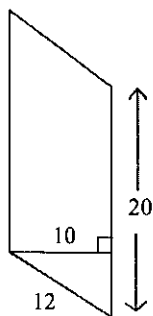


36. Find x .

37. Find y .

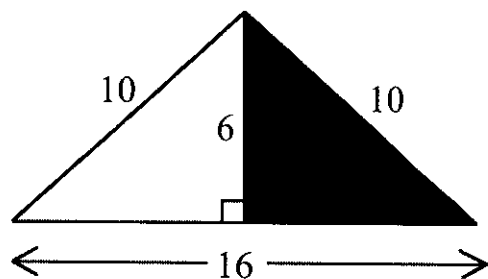
38. Find z .

39. Find the area of the parallelogram.

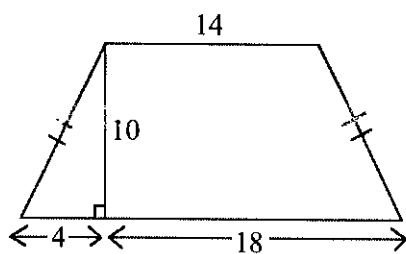


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40. Find the area of the shaded region

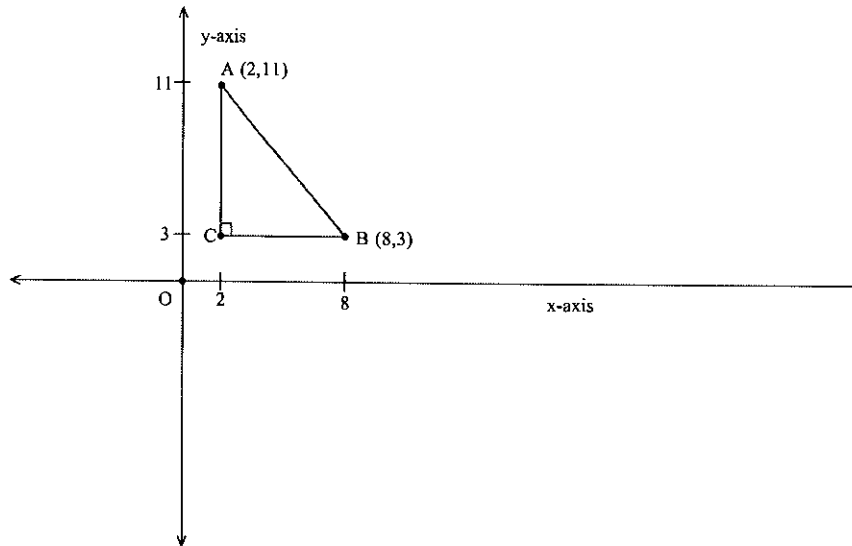


41. Find the area of the trapezoid.



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In the figure below, if $\overline{AC} \perp$ to the y-axis and $\overline{CB} \perp$ to the x-axis, find the following



42. the coordinates of C _____

43. AC and CB _____ and _____

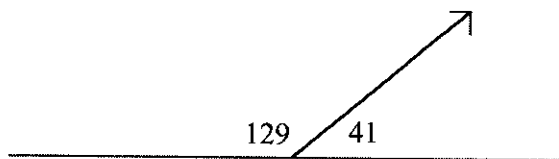
44. The midpoint of \overline{AB} _____

45. the perimeter of $\triangle ABC$ _____

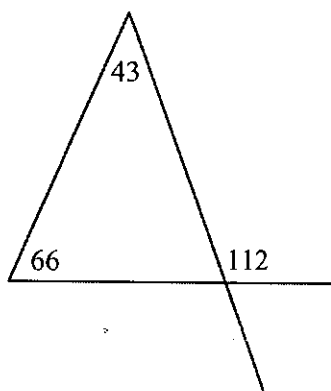
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For problems 46 – 48, explain what is wrong with each of the pictures.

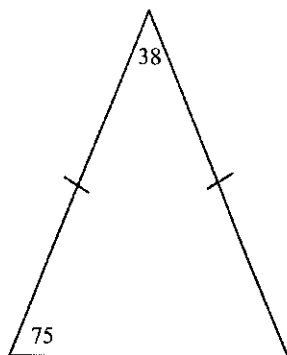
46.



47.



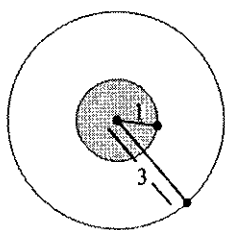
48.



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52. Ralph designed a target computer game. On his screen the circular targets look like the circular areas shown below. If the computer randomly generates a dot that lands within the circular areas, what is the approximate probability that the dot will land in the shaded area?

a. $\frac{1}{8}$ b. $\frac{1}{9}$ c. $\frac{1}{3}$ d. $\frac{1}{4}$ e. $\frac{1}{7}$

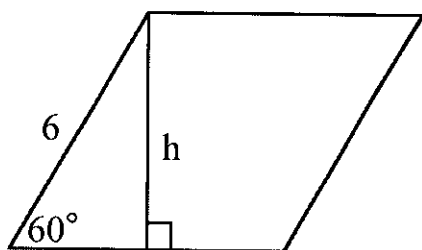


53. The circular field house floor is 200 feet in diameter. If you have to run one lap around the circumference, how far would you have to run?

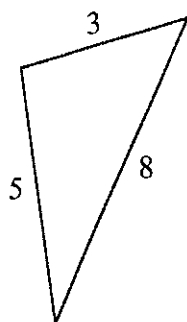
54. A one foot square floor tile (1 ft x 1 ft) costs \$1.00 per square foot. How much would it cost to tile a classroom floor 20 ft long and 15 ft wide? Show all work.

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55. The rhombus below is a glass panel for a door. How many square inches of colored glass will you need for the panel? Show work.



56. Given the measurements of the sides of the triangle, explain what is contradictory about the measurements.



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18) $B \neq D$

19) $B \neq E$

20) C

21) C

~~22) Don't do~~

23) Similar $\rightarrow \frac{15}{10} = \frac{12}{8} = \frac{3}{2}$

$$\frac{AB}{EF} = \frac{10}{15} = \frac{2}{3}$$

24) $\frac{36}{54} = \frac{2}{3}$ Same!

25) $\frac{65 + 70 + x}{3} = 180$
 $x = 45$

Geo $115 + x = 180$
 $x = 45$

NO

26) $\overline{KN} \perp 10$

27) \overline{OR}

28) 10π

29) $x + 2x + 2x + 20 = 180$
 $5x + 20 = 180$
 $5x = 160$
 $x = 32$

30) Isosceles
 $x + 10 = 3x - 10$
 $20 = 2x$
 $10 = x$